

CLAIMS:

We claim:

1. A context-sensitive caching system comprising:
 - a common cache;
 - a common caching engine configured to write cacheable objects to said common cache, said common caching engine being further configured to retrieve cacheable objects stored in said cache;
 - a shared name generator configured to formulate cache keys for locating said cacheable objects written to said common cache;
 - a plurality of configuration specifications, each said configuration specification specifying a caching policy for a single context; and,
 - a plurality of plugable context providers, each said plugable context provider providing said common cache engine with an interface to corresponding ones of said configuration specifications.
2. The system of claim 1, wherein said caching policy comprises:
 - a specified cacheable object type;
 - rules for formulating cache keys for objects of said cacheable object type; and,
 - rules for invalidating objects in said common cache of said cacheable object type.

3. The system of claim 2, wherein said cache key formulation rules comprise:
rules for formulating cache keys for individual objects of said cacheable object
type; and,
rules for formulating cache keys for groups of said individual objects of said
cacheable object type.

4. The system of claim 2, wherein said cache key formulation rules comprise
conditional formulation rules specified using logical operators.

5. The system of claim 1, wherein each said pluggable context provider comprises:
an application configured to provide an interface to said caching policy; and,
a deployment descriptor through which said common caching engine can access
said caching policy.

6. A method of caching contextually variant objects in a common cache comprising
the steps of:
identifying an object type for a requested object;
determining whether said requested object has an object type which is specified
among an enumerated set of cacheable object types which can be stored in the
common cache, said cacheable object type having an associated context; and,
if said requested object has an object type which is specified among said
enumerated set of cacheable object types, computing a cache key for said requested

9 object using cache key formulation rules for said associated context, and retrieving said
10 requested object from the common cache using said formulated cache key.

1 7. The method of claim 6, wherein said computing step comprises the step of
2 computing an individual cache key for said requested object using said cache key
3 formulation rules for said associated context.

1 8. The method of claim 7, wherein said computing step further comprises the step
2 of computing a group cache key for said requested object using said cache key
3 formulation rules for said associated context, said group key associating said requested
4 object with other objects of said associated context which are stored in the common
5 cache .

1 9. The method of claim 6, further comprising the step of invalidating individual
2 objects in the common cache according to corresponding cache policies of associated
3 contexts.

1 10. The method of claim 6, wherein said computing step comprises the steps of:
2 evaluating logical expressions in said formulations rules for said associated
3 context, said evaluation producing a particular formulation rule; and,
4 computing said cache key for said requested object using a cache key
5 formulated using said particular formulation rule.

1 11. A machine readable storage having stored thereon a computer program for
2 caching contextually variant objects in a common cache, the computer program
3 comprising a routine set of instructions for causing the machine to perform the steps of:
4 identifying an object type for a requested object;
5 determining whether said requested object has an object type which is specified
6 among an enumerated set of cacheable object types which can be stored in the
7 common cache, said cacheable object type having an associated context; and,
8 if said requested object has an object type which is specified among said
9 enumerated set of cacheable object types, computing a cache key for said requested
10 object using cache key formulation rules for said associated context, and retrieving said
11 requested object from the common cache using said formulated cache key.

1 12. The machine readable storage of claim 11, wherein said computing step
2 comprises the step of computing an individual cache key for said requested object
3 using said cache key formulation rules for said associated context.

1 13. The machine readable storage of claim 12, wherein said computing step further
2 comprises the step of computing a group cache key for said requested object using
3 said cache key formulation rules for said associated context, said group key associating
4 said requested object with other objects of said associated context which are stored in
5 the common cache .

1 14. The machine readable storage of claim 11, further comprising the step of
2 invalidating individual objects in the common cache according to corresponding cache
3 policies of associated contexts.

1 15. The machine readable storage of claim 11, wherein said computing step
2 comprises the steps of:
3 evaluating logical expressions in said formulations rules for said associated
4 context, said evaluation producing a particular formulation rule; and,
5 computing said cache key for said requested object using a cache key
6 formulated using said particular formulation rule.